

MEMO: AFRED FireSmart Database FRIAA Submission Requirements

The AFRED FireSmart Database began as an inhouse initiative for collecting information, spatial and nonspatial, relating to fuel management treatments completed in Alberta.

Project information is first captured by fuel management professionals, and then delivered to FRIAA to be submitted into the database by Alberta Agriculture and Forestry.

The goal of the database is to be the source of truth for fuel modification in the province. This comprehensive dataset will be used to inform and improve the practice of vegetation management moving forward. It is imperative that quality data is captured at the project level to support future projects and initiatives.

The intent of this memo is to inform contractors about required fields for treatment polygons which are submitted to FRIAA.

Example Entry

Administrative	DATABASE FIELD	FIELD ENTRY
	Project_name	Rainbow Lake East
	Polygon_notes	Completed as per 2014 WMS; brushing after thin/prune
	Year	2016
	Forest_area	High Level Forest Area
Treatment	DATABASE FIELD	FIELD ENTRY
	Maintain_canopy	True
	Canopy_trtment	Partial_thin_manual
	Surface_redistribute	none
	Surface_reduce	Manual
	Surface_remove	none
	Surface_composition	none
	Site_access	All_vehicle
	NewFBP	Fuel_grid

Appendix A. Database Field Descriptions

- Administrative Fields
 - project_name
 - Name of the project, generally reflective of location
 - polygon_notes
 - Optional additional information not captured in required fields
 - Year
 - Year in which the treatment occurred
 - forest_area
 - Provincial Forest Area in which the treatment occurred
- Treatment Fields
 - maintain_canopy
 - This is a true/false field. If a canopy is maintained as part of the treatment (thinning or selective harvest for example), this field is marked as true. If the canopy is removed as part of the treatment (clear harvest and clear mulch for example), this field is will be marked as false
 - canopy_trtment
 - Entry will describe the canopy treatment based on predefined options included in the Appendix C
 - surface_redistribution
 - One of four fields relating to the modification of surface fuels, particularly describing treatments which result in a redistribution of surface vegetation and post treatment canopy debris
 - surface_reduce
 - One of four fields relating to the modification of surface fuels, particularly describing treatments which result in a reduction of surface vegetation and post treatment canopy debris
 - surface_remove
 - One of four fields relating to the modification of surface fuels, particularly describing treatments which result in a removal of surface vegetation and post treatment canopy debris
 - surface_composition
 - This field allows for planting as a treatment option.
 - site_access
 - This field is used to capture information relating to operational access to the site during fire season. Assume unfrozen ground conditions when selecting an entry.
 - NewFBP
 - Field options describe fuel types as defined by the Canadian Forest Fire Behaviour Prediction System. Provides options for options for archiving the treatment polygons, using default fuel grid call and overwriting the default fuel grid call.

Appendix B. Database Field Entry Notes

Canopy_trtment	Description of efforts to mitigate crown fuels in treatment areas
harvest_selective	Harvesting of single trees according to harvest plan and criteria
harvest_patch_ret	Clear harvest in which group of live mature trees are left standing
mulch_patch_ret	Mulching of canopy fuels while retaining groups of standing trees
mulch_strip_ret	Mulching of canopy fuels while retaining standing trees in strips
partial_prescribed_fire	Partial reduction of canopy fuels by use of prescribed fire
partial_thin_manual	Partial reduction of canopy fuels by thinning performed by hand crews
partial_thin_mechanical	Partial reduction of canopy fuels by thinning performed by equipment
partial_unknown	Partial reduction of canopy fuels as a result of unknown treatment type
none	No canopy treatment occurred
mulch_selective	Selective mulching of single trees according to predetermined criteria
clear_mechanical	Complete removal of canopy fuels performed by equipment
clear_mulch	Complete removal of canopy fuels through a mulching prescription
clear_manual	Complete removal of canopy fuels performed by hand crews
clear_harvest	Complete removal of canopy fuels through traditional harvesting
composition_clean_stand_dead	Removal of standing dead trees from treatment area
composition_tending	Partial removal of canopy species to adjust composition to favour less flammable species.

Surface_mgmt_redistribute	Redistribution of surface fuels and post treatment canopy debris
compaction	Canopy and surface fuels compacted over project area
mulch	Canopy and surface fuels mulched over project area
site_prep	Redistribution of surface fuels through site preparation post-harvest
chip	Canopy and surface fuels chipped over project area
mow	Redistribution of grass fuels over project area by mowing
herbicide	Destruction of live surface fuels by chemical means
logging_debris_scattered	Decrease fuel continuity across harvest blocks
Surface_mgmt_reduce	Reduction of surface fuels and post treatment canopy debris
Pile_and_burn_mechanical	Mechanically piling surface fuels and debris, then burning
pile_and_burn_manual	Manually piling surface fuels and debris, then burning
broadcast_burn	Burning of treatment area to reduce surface fuels
hazard_reduction_burn	Burning of grass fuels on a reoccurring basis
graze_normal	Grazing of surface fuels by livestock such as cows and goats
logging_debris_pile_burn	Mechanically piling logging debris and burning post-harvest
manual	Reduction of surface fuels by hand crews or volunteers
Surface_mgmt_remove	Removal of surface fuels and post treatment canopy debris
site_prep	Removal of surface fuels through site preparation post-harvest
broadcast_burn_heavy	Intensive burning of treatment area to remove surface fuels
graze_heavy	Intensive grazing of surface fuels by livestock such as cows and goats
mechanical	Removal of surface fuels by heavy equipment
chip_haul	Breakdown of surface fuels followed by transport from treatment area
logging_debris_community_zone	Post-harvest debris removed to community zone standard
Surface_mgmt_composition	Surface has been planted as part of veg. management prescription.
plant	Treatment area will be planted
none	No planting will be done on site

Site_access	Fire season operational access; assume unfrozen ground condition.
all_vehicle	Access compatible with all vehicle types
heavy_equipment_tracked	Wet ground condition suitable for access by tracked equipment
heavy_equipment_wheeled	Dry ground condition suitable for access by wheeled equipment
helicopter	Fly-in access only, inaccessible by ground vehicles
light_OHV	Site condition unsuitable for access by heavy equipment of any kind
unknown	Site condition and access potential is unknown

FBP Fuel Type	Fuels types defined as per the Canadian Forest Fire Behavior Prediction system
archive	Archived fuel treatment; will not appear in active treatment spatial layers
C-1	Spruce-lichen woodland
C-2	Boreal spruce
C-3	Mature jack or lodgepole pine
C-4	Immature jack or lodgepole pine
C-5	Red and white pine
C-6	Conifer plantation
C-7	Ponderosa pine-Douglas-fir
D-1	Leafless aspen
D-2	Green Aspen
fuel_grid	Use existing fuel grid classification
M-1	Boreal mixedwood-leafless
M-2	Boreal mixedwood-green
M-3	Dead balsam fir mixedwood-leafless
M-4	Dead balsam fir mixedwood-green
O-1	Grass
S-1	Jack or lodgepole pine slash
S-2	White spruce-balsam slash
S-3	Coastal cedar-hemlock-douglas-fir slash